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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,998	01/15/2002	Christopher Frederick Bayne	6001-1001	4386

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EXAMINER

PICKARD, ALISON K

ART UNIT PAPER NUMBER

3676

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/030,998

Applicant(s)

BAYNE, CHRISTOPHER  
FREDERICK

Examiner

Alison K. Pickard

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12, 13 and 15-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 12, 13, 15, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 16-18 and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12, 13, 15, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Budzich (4,353,559).

Budzich discloses an apparatus and method for providing a seal between first and second relatively rotatable parts of a mechanism wherein pulverulent material is entrained in a fluid. A first element 60 is mounted on the stationary part, and a second element 62 is mounted on the rotating part. The first and second elements have projections and recesses with interfacing surfaces that define a passage (see Fig. 4) having a clearance. The pulverulent material enters the passage and is deposited in layers (see col. 3, lines 17-30), thus forming a labyrinthine passage smaller than the clearance and restricting flow of the fluid.

### ***Allowable Subject Matter***

3. Claim 24 is allowed.

4. Claims 16-18 and 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, taken as a whole, does not show nor suggest the combination of limitations

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required by the claims. Specifically, the prior art of record does not disclose an apparatus of method of providing a seal comprising an annular passage defined between first and second elements relatively rotatable with respect to each other wherein the passage is defined by interfacing surfaces of the elements and has a clearance that enables pulverulent material entrained in a fluid to enter and be deposited in layers to form a labyrinthine passage with a width smaller than the clearance such that the flow of the fluid is substantially restricted and wherein the clearance, length, and diameters have ratios as required by the claims. And, there does not appear to be motivation absent Applicant's own disclosure to modify the prior art in the manner required by the claims.

***Response to Arguments***

6. Applicant's arguments filed 4-21-03 have been fully considered but they are not persuasive. Further, The declaration under 37 CFR 1.132 filed 4-21-03 has been considered but is insufficient to overcome the rejection of claims 12, 13, 15, 19, and 20 based upon Morris.

As acknowledged by Applicant (in section 9 of the declaration), it is known that particles entrained in a fluid enter and build up between interfacing surfaces that form a passage with a clearance (also see Budzich '559, Malott '515, or EP '800). In this prior art, for example Budzich, the particles enter and build up, thus creating a smaller passage than the original passage to further restrict flow of fluid. "In time" as disclosed by Budzich and argued by Applicant, the particles wear the seal members and create a larger passage. However, up until that point (i.e. in the initial life of the seal), the seal assembly/method of Budzich reads on Applicant's claimed invention. In other words, the seals of Budzich or Malott are capable of allowing material to enter and build up in annular passages to create a smaller labyrinthine

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passage to further restrict flow of fluid. The rejected claims do not require any further limitations that distinguish these seals from that of Applicant's. However, claims 16-18 and 21 (and 22 and 23), require ratios that are intentionally larger than most labyrinth clearances. While, Malott discloses that the clearance is made a bit larger to house element 80, Malott does not disclose the required ratios. And, as argued by Applicant, there does not appear to be motivation for one of ordinary skill in the art to intentionally make the clearances larger with the required ratios to purposely allow larger particles to enter.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882. The examiner can normally be reached on M-F (9-6:30), with alternate Friday's off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-8729327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1113.

  
Alison K. Pickard  
Examiner  
Art Unit 3676

AP  
July 13, 2003